• COLORADO RIVER •

AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Vol. 1 NOVEMBER 20, 1934 No. 21

IN THE FRONT LINES

Day and night, alone a far-flung desert front, drill crews such as these press forward on the huge job of driving 91 miles of Colorado River Aqueduct tunnels.

· COLORADO RIVER ·
AQUEDUCT NEWS
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
LOS ANGELES, CALIFORNIA

Published twice monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. 1 November 20, 1934 No. 21

THE NEED IS GREAT

For the first time since the Metropolitan Water District was founded, an organized effort is being made this year to obtain contributions from its employees for the work of the Community Chest.

Every man and woman on the job—from the Colorado River to Los Angeles—will be asked to give.

Why this is being done, and why it is vital that an overwhelming response be obtained from this request, might be told in resounding high-flown phrases.

But high-flown phrases are unnecessary. The poignant story can be told in one simple phrase—"The need is great."

And the need *is* great—greater than ever this year.

However high or low his place may be, the man who is employed in times like these (if he is honest with himself) must admit that good luck is his.

And who can be selfish in good fortune? Especially when the need is great.

OPTIMISM JUSTIFIED

Hoping that there would be a response to its offer to print more safety news from the various aqueduct camps, the NEWS decided to enlarge its safety department for this issue.

Instead of the usual one column of space, two columns were set aside. As the items came in from the field they were sent to the printer.

And now, with the NEWS ready for the press, it is found that three, instead of two columns, should have been reserved. In his moments of rosiest optimism, the editor expected no such response.

All of which means that some of the items received cannot be printed for lack of space. But they will be printed in the next issue of the NEWS.

And the safety department will be enlarged again to take care of the news. But please, you correspondents, get in your copy early.

GENERAL MANAGER REVIEWS ACTIVITIES OF MONTH ON AQUEDUCT

(EDITOR'S NOTE: *The following is a brief summary of the monthly report of General Manager and Chief Engineer Weymouth, filed with the Board of Directors in November, covering work during October. These summaries are presented each month.*)

Legal Division

The record preliminary to the payment of $1,500,000 to the District by the Public Works Administration, pursuant to the Loan and Grant Agreement heretofore made, was prepared.

Miscellaneous Activities Division

Certificates of registration were issued to 573 applicants during October by the Labor Office, bringing the total of such certificates issued by the District up to 6,194.

Field Engineering and Construction

Engineering—In Division 2 the staking and referencing of points on the conduit and canal schedules was continued; the building sites at the headquarters camp were staked out.

Safety Engineering — Sixty-two inspections at twenty-four camps were made of tunnels and surface workings during the month of October. The records of all units indicate a material drop in the accident frequency rates during the months of August and September.

Testing Laboratory — Fifteen thousand barrels of Riverside cement and 30,000 barrels of Colton cement were tested for acceptance. A total of more than 100 concrete specimens were received from Mecca Pass Tunnel No. 3 lining and prepared for test.

Operation of Utilities—During the month of October a total of 4,969,097 kwhr of power was used; about 11,755 (long distance) telephone calls handled, and 2,040,194 cubic feet of water delivered.

Parker Dam—Reclamation Bureau—Six Companies, Inc., contractors, started the erection of a tent camp on October 1 and of the permanent camp on October 6. The excavation of the tunnel access road is under way.

Aqueduct Construction—(See tunnel progress table on Page 6.) At Whitewater Tunnel No. 2 the aggregate plant has been completed and the batching plant is complete with the exception of the weighing scales. The construction of a 700-barrel cement silo has been started. At Vernasconi tunnel a hole is being drilled from the surface at the westerly end to accommodate a 12-inch ventilating pipe. The cover of the tunnel at this point is 82 feet.

Civil Engineering Division

Specifications—Specifications were issued during the month for the purchase of 5,000,000 and 800,000 barrels of cement, bids to be opened November 27.

Design—Analysis of Fan Hill conduit and siphon test data has been continued. Work has been started on the design of dams for the Gene Wash and Copper Basin reservoirs. Preparation of steel lists for individual conduit and siphon structures to be built under Specifications 70 and 75 continued.

Distribution — Precast concrete pipe and monolithic concrete pipe along several routes were considered in comparison with the grade conduit section and location.

Hydrography—Bacteriological reports of water samples secured showed that the regular high quality of water furnished to the construction camps is being maintained.

Electrical Engineering Division

Plot plans for each of the five pumping plant installations were completed showing general arrangement of building, outdoor electrical equipment, delivery lines and connections to the main aqueduct. Work was started on the design of the regulating gate and structure for controlling the discharge from Copper Basin Reservoir.

Right-of-Way Division

Regular work was continued on the securing of aqueduct rights of way.

Personnel Division

The net labor turnover for all divisions for September was 6.02 per cent. Of the Coachella camps, Berdoo shows the lowest average turnover during 1934.

Purchasing Division

A total of 1,044 purchase orders were issued covering purchasing amounting to approximately $112,668.

Accounting and Costkeeping Division

Actual costs to October 31 amounted to $28,454,744.50, covering portions of works and activities, the total cost of which is estimated at $69,480,405.

COACHELLA DIVISION SHOPS AT PUSHAWALLA ROUNDING OUT EIGHTEEN MONTHS OF CONTINUOUS SERVICE

One of the busiest and most interesting places along the generally busy and interesting line of the Colorado River Aqueduct is the big frame and corrugated steel building which stands near the portal of Pushawalla adit—the Coachella Division shops, where 18 months of continuous service was being rounded out last week.

Presided over by Mechanical Superintendent Frank Laird and Foreman Charles M. Barber, the shops have played an important part in the steady and rapid progress which has been made on the tunnels of the Coachella Division.

Modern Methods

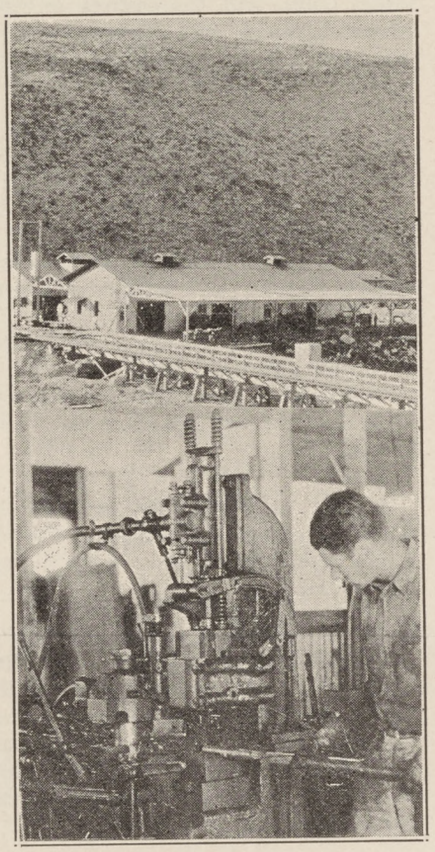
Modern methods of tunnel driving require the use of many powerful machines and mechanical devices. This equipment is subjected to extremely strenuous service, most of it being in operation 24 hours a day. The speed at which the work progresses and the hard conditions under which much of the equipment necessarily operates present a problem in its upkeep. Occasional breakdowns and repairs are inevitable, and any consequent loss of time may be very costly.

Each of the eight camps in the Coachella Division is equipped to take care of minor repairs and maintenance of its equipment, but it is the occasional breakdown which is apt to cause the most serious delay. To meet this condition a Division Machine Shop was erected in May, 1933, at Pushawalla Camp, which is centrally located with a surfaced road to the main Aqueduct highway from which the other camps on the division are readily accessible.

Skilled Staff

The shop was designed and completely equipped to take care of any repair or overhaul which might be required. It is staffed with a skilled personnel of machinists, welders, sheet metal workers, blacksmith, gasoline motor repairmen, and other mechanics under experienced supervision. This organization places at the disposal of the tunnel superintendents the facilities of a modern machine shop close at hand in the field and ready day or night to perform any mechanical service required.

In many instances the shop is prepared in advance to cope with breakdowns by reason of its having already made up assemblies of parts most liable to failure. These assemblies can be installed in place of worn or broken parts so that the equipment can resume operation with the least possible delay. The old parts are then repaired in the shop and made up into new assemblies, which are held ready for another similar breakdown elsewhere. A considerable stock of replacement parts has also been manufactured in the shop to meet the demands which experience has shown most frequently arise. A total of 118 different items is on this list, which includes parts for electric locomotives, power



Exterior and Interior Views of the Pushawalla Shop

shovels and mucking machines, draglines, air drills, air compressors, gas engines, pumps, road equipment and steel sharpening equipment. Many of these parts have been designed in the shop to better meet the special requirement of service on the job. In this way the shop operation can be kept steadier and the time of the men employed as efficiently as possible.

In addition to repair work many types of major equipment require periodic overhaul—for example, portable compressors, tractors, etc. All this equipment is kept in shape without interfering with the regular operations at any camp, or taking the time of its personnel from regular duties, or sending the equipment off the job for repairs.

There have been designed and fabricated in the shop many pieces of equipment which otherwise would have had to have been made elsewhere—the drill carriages used on the division, one in each of the sixteen tunnel headings, as well as transformer vaults, certain mine car chassis, track accessories, etc. An automatic machine for the manufacture of the inert safety primer plugs recently introduced was designed, built and is operated in the shop. With one operator this machine averages 4500 pieces per 8-hour shift, and has so far produced over 800,000 pieces at a very low unit cost. To have drilled and shaped these pieces by hand, as has been the practice elsewhere, would have been a formidable task and the cost much higher.

Equipment Outlined

The shop equipment includes three lathes of 14-inch, 24-inch and 36-inch capacity, respectively, a shaper, two drill presses, a power saw, a 300 pound air hammer, a bolt and pipe threading machine, a 300-ton hydraulic press, punch and shear, arc-welders and complete blacksmithing outfit. Both electric power and compressed air is used for their operation.

A stock of raw materials consisting of steel bars, shafting, plate and other shapes, bronze bushing, etc., is kept on hand so there will be no delay from lack of proper material. Approximately $75,000 worth of materials have been used in work performed to date.

There is also a well equipped sheet metal department. All the sheet metal work required in the installation of the dormitory cooling systems in the eight camps was done on the job, as well as a great variety of other articles required by the construction and operation of the camp.

At present 24 men are employed in the shop, but there have been as many as 50 during the time when fabrication of new equipment was being pressed.

(To Be Continued.)

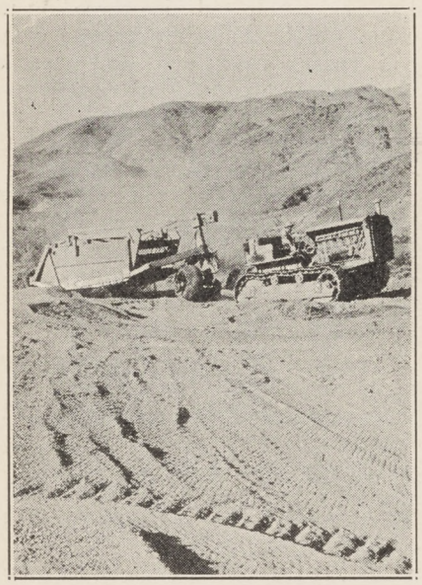
Good Progress Made On New Indio Cut-Off

Aqueduct workers, especially those employed east of Indio, will be interested in the rapid progress being made on the construction of the Indio cut-off link of Highway No. 60.

This road section will shorten the distance between Indio and aqueduct points east by nine miles and will bring several of the aqueduct camps closer to a direct, surfaced highway to Los Angeles. The new road will extend from Shaver's Summit on Highway 60 to the M. W. D. road near Indio.

The total construction cost of the project will be $456,000. The road now being built is 23.3 miles in length. Its alignment contains 18 curves with a minimum radius of 1,600 feet. The route rises from its westerly end near Indio at an elevation of 47 feet below sea level to a maximum elevation of 1,688 feet at the summit. The maximum grade attained is a short distance of 6.3 per cent.

There are being constructed 15 timber bridges, a total of 1,767 linear feet, at a cost of approximately $149,000. These, together with other crossings by means of dips and the necessary ditch and dike controls, will adequately care for the storm problems in so far as it is economically possible to do so.



Work goes forward on the new state highway section—the Indio cut-off, which will bring better transportation facilities to aqueduct camps between Indio and Shaver's Summit.

Safety on the Aqueduct

The following communication has been sent by Assistant General Manager Burkholder of the District to all camp superintendents along the aqueduct line:

"The Safety Clubs and Safety Committees in the aqueduct camps have been doing splendid work in furthering the safety and welfare of the men. That the fullest benefits from this work may be realized, arrangements have been made to feature in the AQUEDUCT NEWS information concerning the activities of these organizations.

"I am particularly interested that you call this matter to the attention of the Safety Clubs and Committees in your respective camps with the request that they furnish items concerning their activities along the following lines:

1. News of Safety Meetings.
2. The best safety suggestion for each month and by whom made.
3. Safety records and awards of safety flags, emblems, etc.
4. First-aid and mine-rescue training, contests, service and awards of certificates.
5. Information pertaining to safety and social activities.

"These news items should reach Los Angeles by the first and fifteenth of each month."

* * * *

A new safety feature installed by Walsh Construction Company is a white coat of paint on the ends of the tunnel locomotives.

* * * *

Norman Jarrett reports that Otto Seydlitz and his six-man crew on the Utah Construction Company's Iron Mountain job have worked for the past fifteen months without a day of lost time due to injury—which should be some sort of record.

* * * *

From Superintendent Weller at Berdoo comes this item:

"Speaking of Safety Measures, here's a successful scheme voluntarily adopted by one of the Berdoo heading crews. Each time a man makes a 'Bonehead Play' a fine is imposed upon him, the amount depending upon the frequency and seriousness of the error, i. e., dropping a wrench costs 25 cents, sticking a steel, 50 cents, breaking equipment or injuring someone, 75 cents or a dollar. The proceeds are used for the entertainment of the heading crew. This practice has resulted in fewer accidents and greater speed."

* * * *

Safety Engineer T. W. Osgood calls attention to an understatement:

"In the November 5, 1934, issue of the AQUEDUCT NEWS, under the caption, "Safety on the Aqueduct," Winston Bros. Company, Coxcomb Tunnel, was credited with no lost-time accidents for May. Coxcomb should also have been credited with no lost-time accidents during September, 1934, with 16,641 man hours worked for that month."

* * * *

Superintendent of Safety C. H. Fry and Assistant Superintendent J. W. Gebb, of the Industrial Accident Commission, were guests of Safety Engineer Osgood on an inspection tour of the Coachella Division recently.

* * * *

One of the most active safety committees on the aqueduct line is Little Morongo's, which consists of the superintendent, the tunnel foremen, and two men chosen from the crew of workmen, the latter rotating in office every two months so that a variety of opinions may be obtained.

Among the safety and health suggestions recently put into practice are: (1) The installation of block signals at the curves at both portals to warn motormen of the approach of a train in the opposite direction, (2) safety bumpers on the rear of the mucking machines to reduce the hazard to the men coupling cars, (3) the universal use of ring handles for couplings and pins, (4) the extinguishing of all lights in the headings during loading operations, power being cut off 300 feet back from the heading and flood lights from locomotive batteries being put into use for illumination, (5) the use of safety clamps to hold stored cars on grades, (6) the installation of sanitary drinking fountains in the headings to replace the old tin cup.

Following the example set last year by Thousand Palms and Wide Canyon camps, Little Morongo recently received 100 per cent first aid training, given by Emory Smith of the United States Bureau of Mines.

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DIVISION ENGINEERS

Division 1.....R. C. Booth
Division 2.....W. E. Whittier
Division 3.....John Stearns
Division 4.....B. C. Leadbetter
Divisions 5 and 6.....J. B. Bond

SUPERINTENDENTS

Colorado River, Copper Basin and Whipple Mt. Tunnels, Walsh Construction Co., F. T. Huntington, Gen. Supt.; W. A. Huntington and E. A. Hatch, Tunnel Supts.

Coxcomb Tunnel and Iron Mt. shaft, Winston Bros., E. A. Bernard, Gen Supt.; F. T. Hillman and R. B. Johnson, Tunnel Supts.

Iron Mt. Tunnel, West Portal, Utah Constr. Co., Ben Arp, Gen. Supt.

East Eagle Mt. Tunnel and West Eagle Mt. Tunnel, east portion, Broderick & Gordon. C. J. Kavanagh, Gen. Supt.

West Eagle Mt. Tunnel, west portion, L. E. Dixon and Bent Bros. P. C. Guinn, Gen. Supt.

Hayfield Tunnel No. 1, Hunkin & Conkey Constr. Co., G. B. Hoag, Gen. Supt.; F. Backlund, Tunnel Supt.

Hayfield Tunnel No. 2, Shofner & Gordon, H. E. Warden, Gen. Supt.

Cottonwood Tunnel, J. F. Shea Co., Inc., Gilbert Shea, Gen. Mgr.; Joe Bonner and Carl Nelson, Tunnel Supts.

Mecca Pass Tunnels, Morrison-Knudsen, George Fortier, Gen. Supt.

Coachella Division, R. M. Merriman, Division Supt.

Yellow Canyon Adit, E. Coachella Tunnel—
District Force Account.....W. L. Taylor
Fargo Adit, East Coachella Tunnel—
District Force Account.....J. H. Manwaring
Berdoo Adit, East Coachella Tunnel—
District Force Account.....F. A. Weller
Pushawalla Adit, East Coachella Tunnel—
District Force Account, Kenneth MacIsaac
Thousand Palms—
District Force Account.....D. L. Reaburn
Wide Canyon—
District Force Account.....John Jackman
Long Canyon—
District Force Account.....E. E. McCabe
Little Morongo—
District Force Account.....R. L. Bryant

Whitewater Tunnels, West Constr. Co., H. E. Carleton, Gen. Supt.; Angus MacDonnell, Tunnel Supt.

San Jacinto Tunnel, Wenzel & Henoch, Walter Hoenecke, Gen. Supt.; W. A. Boyd, Walter Baer, and Jack May, Tunnel Supts.

Bernasconi Tunnel, Hamilton & Gleason Co., H. J. King, Gen. Supt.

Valverde Tunnel, Dravo Contr. Co., R. W. Remp, Gen. Supt.; H. C. Richardson, Asst. Gen. Supt.; Dean Luther, J. R. Glaeser, Jack Stone, and Fred Youmans, Tunnel Supts.

ALL DISTRICT EMPLOYEES REQUESTED TO HELP IN COMMUNITY CHEST DRIVE

From the Colorado River to Los Angeles, Metropolitan Water District employees are responding generously to the drive for a 100 per cent contribution to the Community Chest.

Division heads and camp superintendents have been called upon to handle the solicitation of funds among the employees in their divisions and camps.

This activity is being carried forward simultaneously with the annual drive of Community Chests and other recognized welfare organizations operating in all of the cities in the District. The Community Chests that are operating in other District cities have called upon the Los Angeles Community Chest to act as the medium of contact between these organizations and the Metropolitan Water District.

Employees making contributions to the Community Chests have the full right to allocate their contributions to their home city. Special pledge cards have been provided for District employees, and these pledge cards have a space where the employee may designate the city to which his or her contribution is to be forwarded.

In the event that an employee does not specifically request that his contribution be used in a given city, the money will be distributed on the basis of assessed valuation to Community Chest and welfare organizations of the cities in the District.

Contributions may be paid in full at once, payment may be deferred to a specified date, or installments of a specified amount may be made each month or each quarter throughout the year.

Special emphasis is placed on the great need for contributions to the Chest and similar welfare organizations.

Walsh, Dravo Crews Simultaneously Celebrate

East may be East, and West may be West, but the twain did meet last week in mutual congratulation, as tunnel crews located at opposite ends of the Colorado River Aqueduct celebrated the finishing of an important tunnel section and the establishment of a new progress record.

Crews of the Walsh Construction Company, contractor on Copper Basin Tunnel No. 2 on the eastern end of the aqueduct, turned in the record breaking progress. They drove 274 feet of tunnel through rock in one week, averaging approximately thirteen feet per shift for twenty-one shifts, or thirty-nine feet a day. Jack Lamey is superintendent on the job for the Walsh Company.

At the same time, crews of the Dravo Contracting Company, driving the seven-mile Valverde Tunnel, most westerly aqueduct bore, "holed through" between shafts No. 1 and No. 2. The distance between the two shafts was 6,925 feet, or 1.3 miles.

Crews working from shaft No. 1 drove west to meet those from No. 2, going east. The two sections of tunnel "missed" an exact meeting by five one-hundredths of a foot.

The "holing through" between the two shafts completes excavation on a solid piece of tunnel 14,422 feet, or 2.7 miles, long at the eastern end of the Valverde bore, the additional footage being that which was driven east from No. 1 and west from No. 2.

District employees who contribute to the Community Chest drive now being conducted along the aqueduct will be entitled to one of these emblems, symbolizing participation in a worthy cause.

BEST PROGRESS
This Period
6 day week: Cottonwood, East, 915 ft.
7 day week: Copper Basin No. 2, 1061 ft.

TUNNEL PROGRESS

Oct. 16 to Nov. 15, 1934
Tunnel Excavated to Date, 49.78 Miles

BEST WEEK'S PROGRESS
This Year
6 day week: 7 Palms, West, 241 ft.
7 day week: Copper Basin No. 2, 274 ft.

TUNNELS ON CONTRACT	Length in feet	Number of Shifts	EXCAVATION PROGRESS IN FEET: Average Per Shift	This Period	Total to date
Walsh Constr. Co.					
COLORADO RIVER	(5514)				
West Portal	5514	93	9.4	870	4397
COPPER BASIN, No. 1	(752)				
West Portal	752			0	752
COPPER BASIN, No. 2	(11,580)				
East from adit	1878			0	1878
Adit	330			0	330
West from adit	9702	93	11.4	1061	8209
WHIPPLE MT.	(32,265)				
East from adit	18,352	93	8.6	802	7318
Adit	924			0	924
West from adit	13,913	93	6.0	560	6054
Winston Bros.					
IRON MT.	(39,759)				
East from shaft	9844	81	4.7	379	3449
Shaft	165			0	165
West from shaft	13,743	81	8.2	664	6946
Utah Constr. Co.					
IRON MT.					
West Portal	16,172	93	7.9	730	9934
Winston Bros.					
COXCOMB	(17,795)				
East Portal	8765	81	9.7	783	8282
West Portal	9030			0	0
Broderick & Gordon					
EAST EAGLE MT.	(9,442)				
West Portal	9442	81	7.0	567	1964
WEST EAGLE MT.	(26,494)				
East from adit	7871	81	6.0	542	3856
Adit	2008			0	2008
West from adit	7974	81	8.5	687	3410
Dixon & Bent					
WEST EAGLE MT.					
West Portal	10,649	81	6.8	547	7242
Hunkin & Conkey					
HAYFIELD, No. 1	(9677)				
East from adit	5317	81	3.9	317	3606
Adit	511			0	511
West from adit	4360	81	5.6	451	3367
Shofner & Gordon					
HAYFIELD, No. 2	(5435)				
West Portal	5435	54	7.2	389	4202

TUNNELS ON CONTRACT	Length in feet	Number of Shifts	EXCAVATION PROGRESS IN FEET: Average Per Shift	This Period	Total to date
J. F. Shea Co.					
COTTONWOOD	(20,105)				
East Portal	10,114	81	11.3	915	9359
West Portal	9991	82	9.2	751	9132
Morrison-Knudsen		Concrete Progress			
MECCA PASS	(5,940)	No. 3 Tunnel: Concreting was commenced on Oct. 1st. To date 4452 ft. of arch has been lined.			
No. 1, West Portal	338				338
No. 2, West Portal	997				997
No. 3, East Portal	4605				4605
West Constr. Co.					
WHITEWATER	(10,232)				
No. 1, West Portal	2060	77	6.6	512	880
No. 2, East Portal	8172			0	8172
Wenzel & Henoch					
SAN JACINTO	(67,415)				
East from Cabazon	8553	93	2.5	235	1684
Cabazon shaft	246			0	246
Cross drift	935			0	935
West from Cabazon	22,839	93	0	0	4719
East from Potrero	20,589	24	0	0	160
Potrero shaft	796	0	0	0	796
West from Potrero	6712	44	4.8	211	434
West Portal	8722	90	5.4	484	3704
Hamilton & Gleason					
BERNASCONI	(6220)				
East Portal	6220	60	5.6	334	5412
Dravo Contr. Co.					
VALVERDE	(38,765)				
East from Shaft 1	2140	0	0	0	2140
Shaft 1	64			0	64
West from Shaft 1	1525	80	2.2	179	2265
East from Shaft 2	5400	87	2.3	201	4660
Shaft 2	204			0	204
West from Shaft 2	5400	87	8.0	699	5827
East from Shaft 3	6950	87	2.8	243	2857
Shaft 3	192			0	192
West from Shaft 3	6950	87	3.6	316	5178
East from Adit	5117	61	1.4	84	162
Adit	391			0	391
West from Adit	5283	55	1.3	74	157
Total Excav. Contract Tunnels exclusive of Adits and Shafts	307,390	2436	6.0	14,587	157,708
(In Miles)	58.22			2.76	29.87

TUNNELS ON FORCE ACCOUNT

	Sched.					
EAST COACHELLA TUNNEL		(96,605)				
Yellow Canyon Adit		686			0	686
East from adit	1	10,204	81	7.4	601	8499
West from adit	1	10,076	81	9.9	804	8876
Fargo Canyon Adit		891			0	891
East from adit	2	11,850	81	8.0	646	7664
West from adit	2	15,200	81	3.8	308	6144
Berdoo Canyon Adit		2042			0	2042
East from adit	3	15,824	81	8.2	662	8714
West from adit	3	12,456	81	7.9	636	8916
Pushawalla Canyon Adit		2935			0	2935
East from adit	4	10,186	81	10.1	818	6602
West from adit	4	10,809	81	9.3	755	6727
WEST COACHELLA TUNNELS		(81,454)				
THOUSAND PALMS						
No. 1, West Portal	5	16,058	81	6.6	536	7553
No. 2, Tunnel	5	3838			0	3838

	Sched.					
WIDE CANYON		(16,730)				
No. 1, E. Portal	5	5122	81	4.1	330	3308
No. 1, W. Portal	6	9183	81	3.2	263	6963
No. 2 Tunnel		848			0	848
SEVEN PALMS		(16,730)				
E. Portal	6	8390	0	0	0	4810
W. Portal	7	8340	81	9.6	778	4350
LONG CANYON		(15,295)				
E. Portal	7	8360	81	8.9	724	4254
W. Portal	8	6935				0
BLIND CANYON		(6848)				
E. Portal	8	—				0
W. Portal	8	6848	81	7.0	563	3734
MORONGO No. 1		(5712)				
E. Portal	8	5712	81	9.5	768	3340
W. Portal	8	—				0
MORONGO No. 2		(1820)				
E. Portal	8	1820				0
W. Portal	8	—				0
Total excav. Forct Acct. Tunnels excl. of Adits and Shafts		178,059	1215	7.6	9,192	105,140
(In Miles)		33.72			1.74	19.91
Total Tunnel Excavation (Miles)		91.94		6.5 ft.	4.50	49.78

Heading excavation is counted as two-thirds of full tunnel excavation. Adits and Shafts progress is not included in total footage.

NEWS FROM FIELD AND OFFICE

A new and highly important phase of Colorado River Aqueduct construction was authorized last week as advertisements were issued for bids on the construction of Monrovia tunnels Nos. 1, 2 and 3, and the Pasadena tunnel of the aqueduct distribution system. The tenders will be received on December 17 at District headquarters, 306 W. Third street, Los Angeles. All four of the bores will be ten feet in diameter and circular. The work is divided into three schedules as follows: Schedule 1, Monrovia Nos. 1 and 2—1.67 miles long; Schedule 2, Monrovia No. 3—6.08 miles long; Schedule 3, Pasadena—2.30 miles long. The Monrovia bores are located in the San Gabriel mountains, eight to 14 miles east of the city of Pasadena, and the Pasadena is located principally along Mountain street in the city of Pasadena.

* * * *

Construction has started on a new Santa Fe railroad station for Earp as a result of the construction activity on Parker Dam and the tunnels at the eastern end of the aqueduct line. Included in the increased facilities to be provided by the railroad are extra spur tracks to handle the growing number of cars of freight consigned to this point.

* * * *

F. N. Cronholm has been appointed as construction superintendent of the new Wide Canyon aggregate plant on which work is already under way. It is expected that the plant will be ready for operation soon after the middle of December.

* * * *

Showing his appreciation for the fine record made in the two headings of Cottonwood Tunnel (1,784 feet in 161 shifts, an average of 11.1 feet per shift), Gilbert Shea, general manager for J. F. Shea Company, treated the boys at the east portal to an eight-course "snack" on the night of November 3. Ninety men, according to the Cottonwood statistical department, consumed 142 pounds of turkey, 40 pounds of fruit cake, 20 gallons of punch, seven gallons of ice cream, and 250 hot rolls and biscuits. Chef James R. Taylor was unanimously conceded to be chief engineer.

* * * *

Another genuine aqueduct romance reached its climax recently with the marriage of Miss Florence Marsden, of the Banning office, and Ben Curran, of the accounting office at Berdoo Camp.

Flying during the month of November for the best camp records for safety, progress, and economy on the Coachella Division for October were:

Safety Flag—Berdoo.
Economy Flag—Yellow.
Progress Flag—Pushawalla.

* * *

For the second consecutive month, the "Hard Hat" of Division 3 has been awarded by Division Engineer Stearns to Winston Brothers' Coxcomb tunnel job.

This is Magnus Hjalmarson, who represents the District on the concreting work at Mecca Pass. With a name like that he should be right at home on a job where the contract is held by Morrison-Knudsen.

AQUEDUCT TEMPERATURES

Oct. 28 to Nov. 10, Inclusive

	Max.	Min.
Div. 1	97°	54°
Divs. 2 and 3	97°	51°
Div. 4	96°	58°
Divs. 5 and 6	94°	42°

The latest member of the District's engineering staff to embark upon the proverbial seas of matrimony is William MacMillan, big, strong, silent man from Division 6, whose marriage to Miss Gladys Butlin, of Glendale, was solemnized on November 4. Kirby Schlegel, also of Division 6, gave the groom away. Following the established precedent, Mack is leaving the Valverde home for destitute "S. I.'s" to uphold the dignity of the state of marriage in an apartment in Riverside.

* * * *

There's the old saying about the postman taking a walk on his vacation. Miss Frances Tibbett, of the labor office, is not a postman, but the saying fits just the same. After spending her days viewing the more or less handsome visages of prospective aqueduct workers, she spent the last five days of her vacation along the aqueduct, stopping at Fargo and Yellow and then proceeding to the river, where she was the house guest of Mr. and Mrs. Floyd Huntington of the Walsh Construction Company.

* * * *

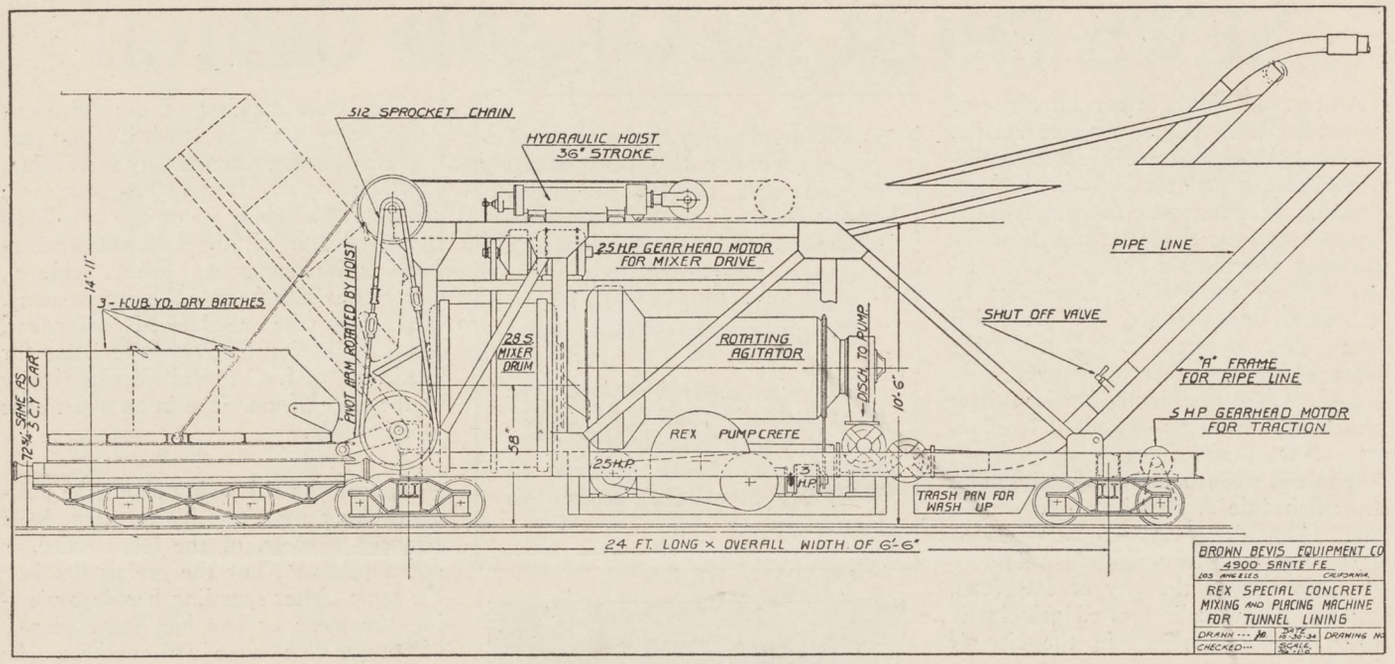
Genial Frank Beaulieu, mayor of Little Morongo and commissary clerk at that camp, has been transferred to Yellow Camp. Upon his departure, he was presented with a cigarette lighter by the Morongo boys who have appreciated his many accommodations and his participation in the sports and activities of the camp.

* * * *

Three camps, Berdoo, Wide, and Yellow, all worked the full month of October without a day being lost by any workman because of injury while on duty. Berdoo was awarded the safety flag, having worked the greatest number of man-hours of the three. October was Wide's second consecutive month without a lost-time accident.

* * * *

Opinion is evenly divided on Division 6 these days as to whether or not Kirby Schlegel is entitled to a commission from Newlywed Bill MacMillan. The latter was so busy getting married that he didn't place a guess in the pool on the probable alignment error in the holing through between Shafts No. 1 and No. 2 at Valverde. Big Hearted Kirby turned in a guess with an I. O. U. for the recent groom—and won by hitting .05 feet right on the nose. The best Kirby could do for himself was fifth place with a guess of .17.


512 SPROCKET CHAIN
HYDRAULIC HOIST 36" STROKE
25 H.P. GEARHEAD MOTOR FOR MIXER DRIVE
PIPE LINE
3 - 1 CUB. YD. DRY BATCHES
SHUT OFF VALVE
28 S MIXER DRUM
ROTATING AGITATOR
DISCH. TO PUMP
"A" FRAME FOR PIPE LINE
5 H.P. GEARHEAD MOTOR FOR TRACTION
REX PUMPCRETE
25 H.P.
TRASH PAN FOR WASH UP
24 FT. LONG × OVERALL WIDTH OF 6'-6"
BROWN BEVIS EQUIPMENT CO
4900 SANTE FE
LOS ANGELES CALIFORNIA
REX SPECIAL CONCRETE MIXING AND PLACING MACHINE FOR TUNNEL LINING
DRAWN ... JB
DATE 10-30-34
DRAWING NO.
CHECKED ...
SCALE 3/4" = 1'-0"

$3,200,000 Siphon, Conduit Work Awarded

Construction of an additional fifteen and one-half miles of Colorado River Aqueduct conduits and siphons, at a cost of approximately $3,200,000, is scheduled soon to be under way, following action of the District's board of directors awarding contracts covering this work to the J. F. Shea Company, Inc., low bidder.

Bids Rejected

Bids on the construction of 12.8 miles of aqueduct conduits and siphons, in addition to the work covered in the Shea contracts, had been received by the District. All of the bids for this work, however, were rejected by the board, when it was pointed out that the low bids submitted contained certain provisions which made them legally unacceptable to the District.

At the same time, the directors postponed decision on the awarding of two siphons, totaling 9,811 feet in length.

Work Readvertised

Meanwhile, General Manager Weymouth has readvertised the 12.8 miles of work on which bids were rejected. This includes 6.28 miles of conduit, 5.61 miles of siphons, and .91 miles of outlet channel.

Sealed proposals for the construction of these works will be received at District headquarters, 306 W. Third Street, until 10 A. M., December 4, at which time they will be opened and read.

District to Open Cement Bids Nov. 27

Bids on approximately 5,000,000 barrels of cement will be received at headquarters of the Metropolitan Water District, on November 27.

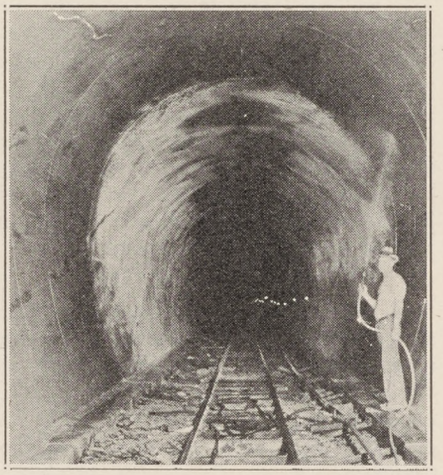
This quantity, in addition to that which already has been purchased by the District, will be sufficient to complete all concrete work in connection with the aqueduct project. It is believed that the cement order to be placed is the largest quantity ever purchased at one time for any project.

Variations Allowed

The specifications cover 5,000,000 barrels of cement to be delivered over the period from July 1, 1935, to June 30, 1940, and give the District the right to increase or decrease the 5,000,000 barrels by twenty per cent.

At the same time bids will be received on 800,000 barrels of cement to be delivered during the months February to December, 1935, the quantity being subject to increase or decrease by twenty-five per cent. After taking into account the variations in quantities, it is estimated that the total quantity of cement to be purchased will amount to 5,000,000 barrels.

The quantity of cement purchased under the 800,000-barrel specifications will be used during the period between the exhaustion of the supply which already is on hand and the first deliveries under the 5,000,000-barrel specifications.



Two phases of a new development in Colorado River Aqueduct construction—the placing of concrete tunnel lining—are shown in the illustrations above.

The drawing is of the ingeniously planned machine for placing lining in the tunnels of the Coachella Division. The machine is now in the process of manufacture and is scheduled to be delivered to the District about December 15 by the Brown-Bevis Equipment Company.

The machine is designed to mix concrete in batches of one cubic yard and place it with a Pumpcrete instead of a pneumatic placing machine.

Concrete will be discharged from the mixer into a rotating agitator which will permit a temporary shut-down without loss of concrete and also the remixing an occasional batch if it is found to be too wet or too dry.

The lower picture shows the type of work being done by Morrison-Knudsen crews on Mecca Pass Tunnel No. 3, where the first concrete lining of aqueduct tunnels is already under way.